



# Sandia National Laboratories

## 2012 Dream Catcher Science

The Dream Catcher Science Program takes the mystery out of science to encourage our children to get involved in engineering and science. The program's purpose is to provide fun and exciting hands-on activities that bridge the traditional classroom theories with experiential learning.

June 16 and 23, 2012

**Southwestern Indian**

**Polytechnic Institute-SIPI**

9169 Coors Blvd. NW

Albuquerque, NM 87120

9am to 3pm

The program is free to all eligible students grades 6 through 12; and all classroom materials are provided.

June 30, 2012

**Explora Children's Science  
Museum**

1701 Mountain Road NW

Albuquerque, NM 87104

10am to 1pm



Sandia National Laboratories

**Program Coordinator**

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## DREAM CATCHER SCIENCE PROGRAM CURRICULUM

- **“BLOWN AWAY” — Young Engineer’s Wind Turbine**

You will be “BLOWN AWAY” when you discover how Electrical and Mechanical Engineers use their knowledge to build wind turbines. Learn how to generate electricity out of thin air or how to generate mechanical power that can lift heavy weights; build a wind turbine and examine how wind energy was used for centuries while recognizing how it is used to power our world today! Are you ready to explore?

- **The MAD SCIENTIST’s Chemistry Lab**

Learn the secrets of becoming a Mad Scientist! Learn to harvest the power of atoms and how to combine chemicals to make a rocket car, space-worthy door locks, or that perfect cup of hot cocoa. Chemistry is the answer, my friends! All potential mad scientists are welcome, no previous experience necessary!

- **FUN PHYSICS — Introduction to Physics**

Learn the basics and fundamentals of physics by pushing unknown weights around; reeling in knowledge that springs you forward; gravitating minds to manage hands-on projects; and using pulleys to lessen the bearing loads of new awareness...And just plain having fun!

- **“Enginu-ing” & Design**

Learn techniques to be an “ingenious” engineer through engineering practices, applying design methods and the defining traits of a successful engineer. Ingenious students are introduced with hands-on activities in robotics, nano and micro engineering and by using a Computer Numerical Control (CNC) and laser-cutter machines.

### Explora Children’s Science Museum

After two full days of exhaustive learning, we will take a much-needed break by touring the Explora Children’s Science Museum on June 30. The tour will start at 10:00 am. Explore this amazing museum, see some fantastic displays, and then test your skills with the incredible hands-on science and engineering

*For further information on the Dream Catcher Science Program, please visit:*

<http://dreamcatchers.sandia.gov>

*The Dream Catcher Science Program is sponsored by Sandia National Laboratories’ Community Involvement Department.*



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## ***DREAM CATCHER SCIENCE PROGRAM INFORMATION***

The 2012 program is offering four science and engineering classes filled with hands-on activities. Each student will enroll in **one** class to participate in on June 16 and 23, 2012. The classes will begin at 9:00 am and end at 3:00 pm on both days. On Saturday, June 30, parents will bring their student(s) to Explora Children's Science Museum for a guided tour of the museum. Parents are invited to participate or volunteer along with their student(s) during the classroom portion of the program. Lunch will be provided for the students each day of the program.

There are no costs associated with the program; however, each student is asked to commit to attending the full program. If a student is unable to attend any session, please notify the program coordinator as soon as possible. The vacancy left by the student will be filled immediately. Supplies are provided and distributed on the first day of class; students are then required to bring supplies to class each week.

To be eligible for the program, students must be enrolled in grades 6 through 12 for the 2012-13 academic year.

### ***Application Instructions:***

Students can register online or complete the attached application; mail or fax to the program coordinator.

Registration deadline:	<b>June 1, 2012</b>
Register online:	<a href="http://dreamcatchers.sandia.gov">http://dreamcatchers.sandia.gov</a>
Fax completed forms to:	505-284-1290 Attention: Karen McDaniel
Mailing Address:	Karen McDaniel, Program Coordinator Sandia National Laboratories PO Box 5800, MS 0374 Albuquerque, NM 87194-0374  Phone: (505) 845-9713 Email: <a href="mailto:klmcdan@sandia.gov">klmcdan@sandia.gov</a>